

A NEW SPECIES OF *SERICOCEROS* KONOW (HYMENOPTERA: ARGIDAE)  
DAMAGING VILLETANA TREES, *TRIPLARIS CARACASANA* CHAM.  
(POLYGONACEAE) IN PARAGUAY

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*Abstract.*—A sawfly was discovered severely damaging leaves of villetana trees, *Triplaris caracasana* Cham. (Polygonaceae) in Paraguay. The sawfly, *Sericoceros vitellanae* Smith, n. sp., is described and separated from other *Sericoceros* species. *Triplaris* is a new host record for a species of *Sericoceros*. Notes on the maternal care, larval feeding habits, and pupation of the sawfly are presented.

*Key Words:* Hymenoptera, Argidae, *Sericoceros*, new species, *Triplaris*, Polygonaceae

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Villetana trees, *Triplaris caracasana* Cham. (Polygonaceae), are important native shade trees in central Paraguay. They are well adapted to wet soils and are abundant around Asunción. Damage to the foliage caused by sawfly larvae was reported recently at the Facultad de Ciencias Agronómicas, Universidad Nacional de Asunción, in San Lorenzo, 11 km from Asunción. Adults reared from larvae and adults collected ovipositing on the leaves were obtained by the senior author, and they represent a new species of *Sericoceros* Konow. The species is described below and notes are given on its biology.

*Sericoceros* includes 20 species and is distributed from Mexico to northern Argentina (Smith 1992). Known hosts are *Coccoloba* spp., *Lonchocarpus* sp., and *Chrysobalanus* sp. This occurrence on *Triplaris* represents a new host record.

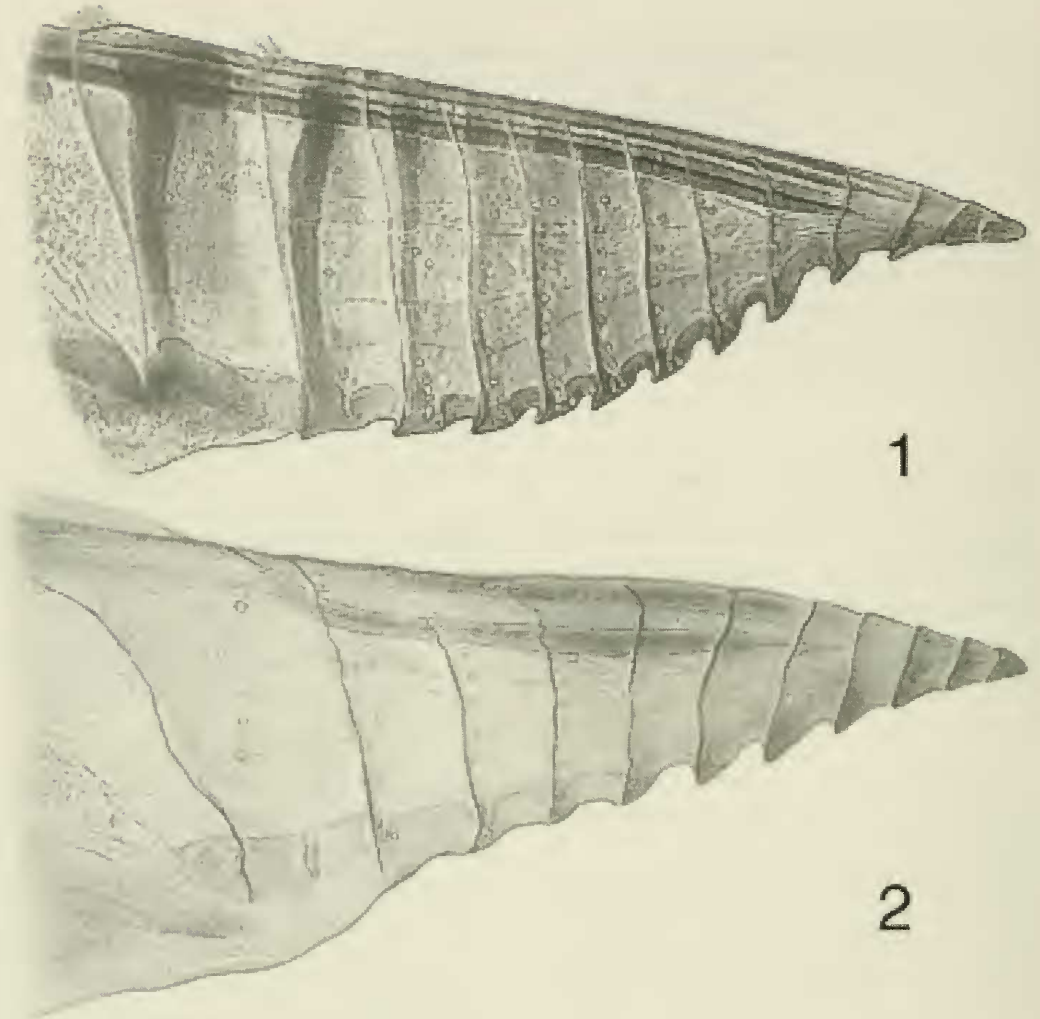
*Sericoceros villetanae* Smith, new species  
(Figs. 1, 3–5)

Female.—Length, 8.5 mm. Antenna with scape orange, pedicel brown, flagellum

black. Head black with clypeus, supraclipeal area, and interantennal area orange; labrum and palpi whitish; mandible orange at base, apical  $\frac{2}{3}$  reddish brown. Thorax, abdomen, and sheath orange. Legs with coxae, trochanters, and femora orange; foretibia black with inner surface and basal half of outer surface orange; midtibia with inner surface orange, outer surface black and extreme apex completely black; hindtibia with inner surface orange, outer surface and apical  $\frac{1}{4}$  black; tarsi black. Wings lightly, infuscate, paler to hyaline at apices; veins and stigma of forewing black except extreme base of stigma, costa, and subcosta orange.

Antennal length 1.3× head width. Head and body smooth, shining, impunctate, without surface sculpture. Hindwing with anal cell present. Sheath slender in dorsal view, not expanded or widened at apex. Lancet as in Fig. 1, narrowly constricted at apex and with basal and central annuli subparallel and close together.

Male.—Length, 6.7–7.0 mm. Antenna black, third segment with inner surface of



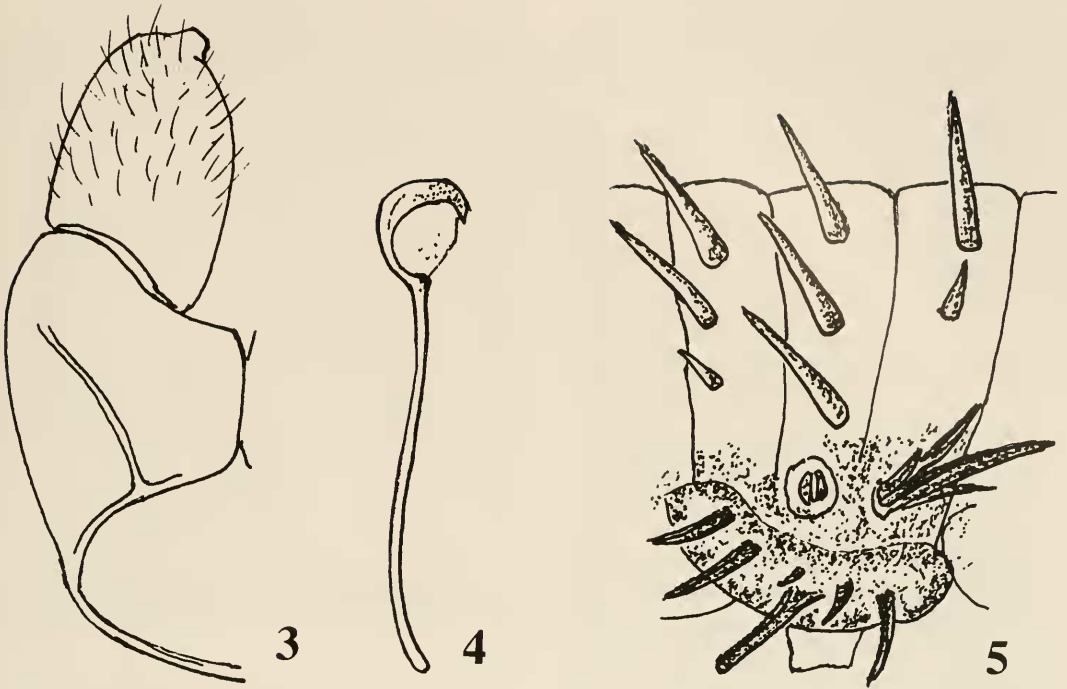
Figs. 1-2. Lancets. 1, *Sericoceros villetanae*. 2, *S. calanticatus*.

basal  $\frac{3}{4}$  of each furcation white. Head black with labrum white. Thorax black with pronotum, mesonotal lateral lobes, and narrow lateral margins of mesoprescutum orange. Abdomen black with sterna whitish. Legs black with outer surface of forefemur and foretibia white. Wings hyaline; veins black. Third antennal segment bifurcate; antennal length subequal to head width. Genitalia as in Figs. 3, 4; inner margin of parapenis nearly truncate, head of penis valve rounded in lateral view.

Larva (from a late instar).—Length, 17.0 mm. Head dark reddish brown, more black

around each eye and paler to white on lower part of frons, clypeus, and labrum. Thoracic legs yellow brown; body generally pale with black longitudinal band on each side. Spines above spiracles and on dorsum yellow brown, those around and below spiracles in black band, black. Small plates on venter anterior and posterior to prolegs amber. Tenth tergum black, reddish brown anteriorly.

Head with scattered, short setae, no longer than width of antenna. Antenna a single flat segment. Each mandible with 5-7 long setae on outer surface; clypeus with 1-2 se-



Figs. 3–5. *Sericoceros villetanae*. 3, Male genitalia, genital capsule, ventral view of left half. 4, Male genitalia, lateral view of penis valve. 5, Lateral view of third abdominal segment of larva.

tae on each side; labrum with 2–3 setae on each side, anterior margin strongly emarginate at center; maxillary palpus 3-segmented, with 1 seta on palpifer and one on first segment; lacinia with 4–5 bifurcate or trifurcate spines; labial palpus 2-segmented, prementum with 3 setae.

Prothoracic leg without tarsal claw. Prolegs on abdominal segments 2–9, small on 2, 8, and 9. Body covered with long spines, the longest being longer than the width of an abdominal annulet. Abdominal segments 1–9 each 3-annulate. Ornamentation of typical abdominal segment as in Fig. 5. First annulus with 3 spines, lower one smallest; second annulet with 3 long spines above spiracle, third annulet with 1 long and 1 short spine; postspiracular area with tubercle composed of 4 long spines; surpedal area with 5 long spines, third and fourth from anterior the shortest, and one long blunt, tubular spine with white tip appearing to be a glandular opening. Tenth tergum with 20–25 long spines. Venter with 2

short, conical spines between prolegs and 2 or 3 smaller spines posterior to these.

Host.—*Triplaris caracasana* Cham. (Polygonaceae).

Holotype.—Female, labeled “Paraguay: Central: San Lorenzo, April 1999, E. Benítez coll., on *Triplaris caracasana*.” Deposited in the Museo Nacional de Historia Natural del Paraguay, Asunción.

Paratypes.—PARAGUAY: Same data as for holotype (3 females, 4 males); Central, San Lorenzo, 18.iii.1999, E. Benítez coll., *S/Triplaris* sp. (2 females); Asunción, Dic-1992, B. Garcete, *S/Triplaris* sp. (“Villetana”), adult resting over the eggs (1 female); F. de Lamora, XII-1997, B. Garcete (1 female). Representatives of each sex deposited in the Museo Nacional de Historia Natural del Paraguay, Asunción; Facultad de Ciencias Agrarias, Universidad Nacional de Asunción, San Lorenzo; National Museum of Natural History, Smithsonian Institution, Washington, D.C.

Other material.—One pin with eggs at-

tached on surface of part of a leaf, two pins with cocoons on parts of leaves, and a vial of five larvae have the same data as the holotype.

Discussion.—The female coloration of *S. villetanae* is similar to that of *Sericoceros calanticatus* (Konow) recorded from the states of Espírito Santo and Rio Grande do Norte, Brazil, and it will run to *S. calanticatus* (couplet 17) in Smith's (1992) key to species. The lancet is very different from that of *S. calanticatus*, however, as compared in Figs. 1 and 2. The lancet of *S. villetanae* is broad, but narrowly constricted at its apex, the basal and central annuli are close together and subparallel, and there are more distinct teeth. The male of *S. calanticatus* is unknown, but that of *S. villetanae* can be distinguished from other known males of *Sericoceros* by comparison of Figs. 3 and 4 with figures 181–190 in Smith (1992). In *S. villetanae*, the head of the penis valve is more rounded and the inner margin of the parapenis is more truncate than in other species.

Larvae for three other species of *Sericoceros* are known, *S. mexicana* (Kirby) (larva described as *S. edwardsii* (Cresson) by Smith 1972), *S. krugii* (Cresson), and *S. gibba* (Klug) (Smith 1972, Kimsey and Smith 1985). The larva of *S. villetanae* is easily distinguished from those three by the long acute spines (much longer than the width of an abdominal annulet) on the body, presence of 5–7 setae on the outer surface of each mandible, and the general pale coloration with a black longitudinal stripe on each side in the spiracular area. The other three species have short, more conical or blunter protuberances which are shorter than the width of an abdominal annulet, have one seta on the outer surface of each mandible, and are generally pale with the tubercles black (Smith 1972, fig. 43; Kimsey and Smith 1985, figs. 24, 25).

Biology.—On March 12, 1999, EABD obtained adults and larvae collected from villetana trees on the campus of Universidad Nacional de Asunción, including a fe-

male that was sighted protecting an egg batch of about 75 orange eggs on a leaf. The egg batch was symmetrical and round to oval. The eggs were oval and attached on end perpendicular to the leaf surface. The female kept this position over the eggs for several days until the larvae hatched.

In the laboratory, larvae were placed in acrylic rearing boxes (33 × 39 × 25 cm) at room temperature (27°C). The larvae were positioned next to each other while feeding, embracing the border of the leaf with the legs and with the abdomen raised and coiled like a question mark. This larval position was described by Costa Lima (1960) for other symphytan larvae. In this position, the larvae remind one of a small monkey, thus locally they are called “Yso-ka'i” (monkey worm). In this position, the larvae eat all the leaf except for the central vein.

The first cocoons were observed on April 3, 1999. The larvae spin a light brown cocoon made of carton-like matter, barrel-like in shape, with one end rounded and the other end with a flat circular lid. It has a double wall, the inner wall dull and parchment-like and the outer wall irregularly netted, similar to the cocoons of Argidae as described by Wong (1961). The cocoon is firmly attached to the substrate, leaves, or walls of the cage, by one or more sides. Twenty-eight females and 13 males emerged in April 1999.

*Triplaris* has not been recorded as a host for species of *Sericoceros*. Hosts for other species are *Lonchocarpus* sp. (Leguminosae) for *S. vumirus* Smith; *Coccoloba* spp. (Polygonaceae) for *S. albicollis* (Klug), *S. gibbus* (Klug), *S. krugii* (Cresson), and *S. mexicanus* (Kirby); and *Chrysobalanus* sp. (Rosaceae) for *S. krugii*.

The only references to the biology of *Sericoceros* species are Martorell (1941) for *S. krugii* in Puerto Rico and Kimsey and Smith (1985) for *S. gibbus* in Panama. Martorell indicated maternal care for *S. krugii* by stating that “During oviposition the females do not move from the egg-mass even if disturbed” and “. . . even after the last

egg of a cluster is laid the female stays over the egg-mass as if they were brooding the eggs." Kimsey and Smith (1985) did not indicate maternal care for *S. gibbus*.

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